



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-5B4 BYPASS RATIO: 5.9
 UNIQUE ID NUMBER: 2CM014 PRESSURE RATIO (π_{00}): 27.1
 COMBUSTOR:
 ENGINE TYPE: TF RATED THRUST (F_{00}) (kN): 117.9

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	8.8	58.1	57.6	15.1
AS % OF ORIGINAL LIMIT	44.8	49.2	61.1	66.7
AS % OF CAEP/2 LIMIT (NO _x)			76.4	
AS % OF CAEP/4 LIMIT (NO _x)			92.4	
AS % OF CAEP/6 LIMIT (NO _x)			105.0	
AS % OF CAEP/8 LIMIT (NO _x)			125.1	

DATA STATUS

- PRE-REGULATION
 x CERTIFICATION
 - REVISED (SEE REMARKS)

TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES
 - DEDICATED ENGINES TO PRODUCTION STANDARD
 - OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
 (ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
 x OUT OF PRODUCTION (DATE: -)
 - OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (%F ₀₀)	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	1.166	0.10	0.50	28.70	10.0
CLIMB OUT	85	2.2	0.961	0.10	0.50	23.30	11.7
APPROACH	30	4.0	0.326	0.13	2.33	10.00	0.0
IDLE	7	26.0	0.107	3.87	31.90	4.30	0.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			421	674	5595	5861	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D _p /F ₀₀ (g/kN) or AVERAGE SN (MAX)				5.7	47.3	49.7	11.7
SIGMA (D _p /F ₀₀ in g/kN, or SN)				0.4	0.4	0.5	1.3
RANGE (D _p /F ₀₀ in g/kN, or SN)				5.26-6.04	47-47.7	49.3-50.2	10.2-12.7

ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.5-98.2
TEMPERATURE (K)	283.4-293.9
ABS HUMIDITY (kg/kg)	0.0067-0.0076

FUEL

SPEC	Jet A
H/C	1.93
AROM (%)	16.8

MANUFACTURER: CFM International
 TEST ORGANIZATION: CFM56 Evaluation Engineering
 TEST LOCATION: Peebles Site IIIB
 TEST DATES: 07/10/1992-08/10/1992

REMARKS

1. Ref GE Report R92AEB262.
2. Engine S/N 779101

Compliance with Fuel Venting requirements: - ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)